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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/768,003	01/24/2001	Shinichi Takahashi	Q62765	9261

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EXAMINER

CHU, KIM KWOK

ART UNIT

PAPER NUMBER

2653

DATE MAILED: 07/01/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/768,003

Applicant(s)

TAKAHASHI, SHINICHI

Examiner

Kim-Kwok CHU

Art Unit

2653

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 6 is/are rejected.
- 7) ☒ Claim(s) 3-5 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on May 4, 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 6) ☐ Other: _____

Drawings

1. The drawings are objected to because Figure 1 is not designated by a legend such as "Prior Art". The legend is necessary in order to clarify what applicant's invention is. See MPEP ' 608.02(g). Correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

*A person shall be entitled to a patent unless --
(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.*

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1 and 6 are rejected under 35 U.S.C. § 102(b) as being anticipated by Taniguchi et al. (U.S. Patent 6,091,698).

Taniguchi teaches an optical pickup apparatus for reading information from a plurality of types of discs at different reading wavelengths having all of the elements and means as

recited in claims 1 and 6. For example, Taniguchi teaches the following:

(a) as in claim 1, a light source 1 having a plurality of integrated light emitting portions 4 for emitting laser beams of different wavelengths (Fig. 7; column 5, lines 2-13);

(b) as in claim 1, the light source 4 being adapted to selectively emit one of the laser beams of different wavelengths (Fig. 7; column 5, lines 2-13);

(c) as in claim 1, a photodetector PD1, PD2 for detecting the laser beam (Fig. 7);

(d) as in claim 1, an optical system 2 for directing the laser beam emitted from the light source 4 to the disc D (Fig. 5);

(e) as in claim 1, the optical system 2 for directing the laser beam reflected by the disc to the photodetector PD1, PD2 (Fig. 5);

(f) as in claim 1, the light source 4 is positioned such that a straight line connecting respective light emitting points of the plurality of light emitting portions is coincident with a tangential line of a track on a disc to be reproduced (Fig. 7);
and

(g) as in claim 6, the light source 4 is a one-chip laser diode which is formed with one electrode as a common electrode for the plurality of light emitting portions (Fig. 7).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Taniguchi et al. (U.S. Patent 6,091,689) in view of Takahashi (U.S. Patent 6,195,315).

Taniguchi teaches an optical head very similar to the instant invention. For example, Taniguchi teaches the following:

(a) as in claim 2, a photodetector PD1, PD2 includes a plurality of four-division light receiving sections A1-A4, B1-B4 arranged corresponding to each of the plurality of laser beams of different wavelengths (Figs. 3 and 7);

(b) as in claim 2, the photodetector is configured such that central division lines of the four-division light receiving sections are in alignment with one another (Fig. 7); and

(c) as in claim 2, the photodetector PD1, PD2 is disposed such that the central division lines are coincident with the tangential line of the track (Fig. 7).

However, Taniguchi does not teach the following:

(a) the optical system includes an astigmatism element for providing the laser beam with astigmatism.

Takahashi teaches an astigmatism element 210 which generates an astigmatism for the light beam (Fig. 15A).

One well known method to obtain a focus error signal is to irradiate an astigmatic light beam on a detecting means. For example, Takahashi positions a cylindrical lens 210 in a reflected beam's light path. Hence, to generate a servo signal such as a focus error signal in Taniguchi's optical pickup, it would have been obvious to one of ordinary skill in the art to use an astigmatism generating means such as Takahashi's, because the astigmatism provides uneven light intensities on Taniguchi's photodetecting elements so that focus error signal can be obtained.

Allowable Subject Matter

6. Claims 3-5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is an Examiner's statement of reasons for the indication of allowable subject matter:

As in claim 3, the prior art of record fails to teach or fairly suggest a photodetector includes the following features:

(a) the photodetector further includes a pair of sub-beam receiving sections, disposed one after the other in a direction in which said central division lines extend, for receiving the sub-beams; and

(b) the plurality of four-division light receiving sections are arranged such that one of the sub-beams is received by a different four-division light receiving section adjacent to a four-division light receiving section which receives the selected laser beam.

As in claim 4, the prior art of record fails to teach or fairly suggest a photodetector includes the following features:

(a) the photodetector further includes a pair of sub-beam receiving sections, disposed one after the other in a direction in which the central division lines extend, for receiving the

sub-beams; and

(b) sub-beam receiving sections are formed with regions which can receive all sub-beams generated from all the laser beams of different wavelengths emitted from the light source.

As in claim 5, the prior art of record fails to teach or fairly suggest a photodetector includes the following features:

(a) the photodetector includes a plurality of four-division light receiving sections arranged in correspondence to each of the plurality of laser beams of different wavelengths;

(b) the plurality of four-division light receiving sections arranged such that central division lines thereof are in alignment with one another;

(c) two divisional regions of the four-division light receiving section for receiving an arbitrary laser beam serve as two divisional regions of a four-division light receiving section for receiving a laser beam of a different wavelength from that of the arbitrary laser beam; and

(d) the remaining two divisional regions other than said two divisional regions are also used as a sub-beam receiving section for receiving said sub-beam.

The features indicated above, in combination with the other elements of the claims, are not anticipated by, nor made obvious over, the prior art of record.

Prior Art

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Shih et al. (6,188,132) is pertinent because Shih teaches an integrated laser sources with two laser emitting elements.

Sugiura et al. (6,130,872) is pertinent because Sugiura teaches an optical system having two laser sources with different wavelengths.

Funato (6,072,579) is pertinent because Funato teaches an optical system having an astigmatism generating element.

Park (5,986,998) is pertinent because Park teaches an integrated laser sources with two laser emitting elements.

Yokoyama (5,161,040) is pertinent because Yokoyama teaches an integrated laser sources with a plurality of laser emitting elements.

9. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks Washington, D.C.
20231 Or faxed to:


(703) 872-9314 (for formal communications intended for
entry. Or:

(703) 746-6909, (for informal or draft communications,
please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park
II, 2021 Crystal Drive, Arlington. VA., Sixth Floor
(Receptionist).

Any inquiry of a general nature or relating to the status of
this application should be directed to the Group receptionist
whose telephone number is (703) 305-4700.

Any inquiry concerning this communication or earlier
communications from the examiner should be directed to Kim CHU
whose telephone number is (703) 305-3032 between 9:30 am to 6:00
pm, Monday to Friday.


THANH V. TRAN
PRIMARY EXAMINER

Kim-Kwok CHU
Examiner AU2653
June 12, 2003

(703) 305-3032